Journal of Applied Spectroscopy 2003 vol.70 N6, pages 942-947

Influence of the matrix on the atomic absorption of a transversely heated graphite atomizer

Voloshin A., Gil'mutdinov A., Zakharov Y.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

We have investigated the influence of the sodium chloride and potassium sulfate excess in a sample on the absorption signals of Ag, Al, Au, As, Bi, Cd, Cu, Ga, Ge, In, Mn, Pb, Sb, Se, Sn, and Tl in a transversely heated graphite atomizer (THGA) of the SIMAA 6000 multielement spectrometer with a Zeeman background corrector. The maximum amounts of salts causing no change in the integral atomic absorption and no corrector errors in using the universal Pd-M--modifier and varying the internal argon flow have been determined. They range for different elements from a few thousand of micrograms to tens. Comparison, as to this index, with the longitudinally heated atomizer HGA has been made. In many cases, the THGA is much better than the HGA.

http://dx.doi.org/10.1023/B:JAPS.0000016315.45853.4a

Keywords

Atomic absorption, Graphite atomizer, Matrix interference, Modifier